

ABSTRACT

A color video display apparatus comprises a pixel array with each pixel containing one or more LEDs for generating each of the selected colors and a diffractive optical element positioned in front of the array to form the transmitted light into a substantially elliptical pattern. Improved uniformity for the apparatus is achieved by measuring the intensity of each separate color generating LED in each pixel, recording each intensity and varying the current to each separate color LED or LEDs so that every LED or LEDs responsible for each color to provide a suitable color output. A feature of the apparatus is that a number of separate modules, each having a pixel array, can be combined to construct a video image board. These boards have applications in such areas as billboards along roadways and as signs in stadiums.